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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/594,721      | 06/16/2000  | Yuji Yamamoto        | 048369/0117         | 2350             |

22428 7590 02/11/2004

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| EXAMINER |
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RUDE, TIMOTHY L

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| ART UNIT | PAPER NUMBER |
|----------|--------------|

2871

DATE MAILED: 02/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/594,721

Applicant(s)

YAMAMOTO ET AL.

Examiner

Timothy L Rude

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 4-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1,2 and 4-12 are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 20030916.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Election/Restrictions***

1. This application contains claims directed to the following patentably distinct species of the claimed invention:

Species A, Figure 4, drawn to a liquid-crystal display panel comprising: a columnar spacer formed on a transparent electrode film in a region wherein said transparent electrode film is not in a contact hole and is one layer of a multi-layered film having little variation in thickness.

Species B, Figures 1, 3, and 5, drawn to a liquid-crystal display panel comprising: a columnar spacer formed on a transparent electrode film in a region wherein said transparent electrode film in a contact hole and is one layer of a multi-layered film having little variation in thickness.

Species C, Figure 6, drawn to a liquid-crystal display panel comprising: a columnar spacer is formed in a contact hole and is not formed on a transparent electrode film and having the particular structure of 602 (please note dotted line).

Species D, Figure 7, drawn to a liquid-crystal display panel comprising: a columnar spacer is formed in a contact hole and is not formed on a transparent electrode film and having the particular structure of 702 (please note no dotted line).

Presently, method claims are in a form that is obvious given the structure, so presently method claims are not restricted from device claims. However, any added method claims with limitations that are not obvious given the structure might be restricted, as need be, at that time. Also, Applicant states that columnar spacers, 203, of the present invention may be made of either an inorganic material or an organic material (Specification page 7, lines 2 and 3), so for purposes of the instant Application, examiner considers organic spacers to be not patentably distinct from inorganic spacers.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, there are discrepancies in the Figures and possibly the claims, so it is unclear which claims might be generic. Specifics regarding discrepancies, below, follow this restriction requirement.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim

is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim

remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

2. As a courtesy, examiner offers the following preliminary comments regarding the present state of the instant Application:

The following issues make it clear that certain details are critical to establishing any possible existence of allowable subject matter and drove the need for the above restriction requirement.

It is respectfully pointed out that, although Applicant has right of lexicography, the use of "pixel electrode" and "signal electrode" as terms for the source/drain electrode, 217, used to drive the transparent pixel electrode, 205, runs so strongly against convention in the art of liquid crystals as to be unacceptably misleading and confusing. Applicant's transparent pixel electrode, 205, is the pixel electrode, not 217. Also, the source/drain electrode, 214, driven by the signal line is the signal electrode, not the source/drain electrode, 217, used to drive the pixel electrode, 205. Appropriate corrections will be required.

It is respectfully pointed out that there are substantial deficiencies with Figures 1, 2, and 5-7. Please note Applicant's remark at the top of Page 3 of IDS submittal, Paper

No. 20030224, signed 19 February 2003; Applicant indicates the transparent pixel electrode, 205, is not electrically connected to the source/drain electrode (Applicant's pixel electrode, 217). Please consider the fact that such is illustrated and such would render the device inoperative.

Regarding Figure 1, a careful review of the specification indicates 205 is electrically connected to 217 despite errors in Figure 1 (Specification page 9, lines 2-4, please note 214 should be corrected to source/drain electrode, 217, and similarly on page 11, lines 9-12, please note 514 should be corrected to source/drain electrode, 517); similar problems exist for Figures 4-7.

Regarding Figure 2, section A-A' does not reasonably represent the region illustrated in Figures 1 and 4-7.

Also, not all numbered items in all Figures have support in the Specification.

Claims 11 and 12 were missing from the most recent submittal of the claims.

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy L Rude whose telephone number is (571) 272-2301. The examiner can normally be reached on Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H Kim can be reached on (703) 305-3492. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



tlr

Timothy L Rude  
Examiner  
Art Unit 2871



TOANTON  
PRIMARY EXAMINER